



NATIONAL MARINE SANCTUARIES TM

Monterey Bay National Marine Sanctuary

Multicultural Education for Resource Issues Threatening Oceans (MERITO)

MERITO Program Report 2002-2003

November 15, 2003

U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Ocean Service
National Marine Sanctuary Program



NOAA Ocean Service



Migrant education
students explore the
wonders of Point
Pinos tidepools

Pájaro Middle School students present their
science projects to peers and parents during
Family Watershed Night



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MULTICULTURAL EDUCATION FOR RESOURCE ISSUES THREATENING OCEANS

ACCOMPLISHMENTS 2002-2003

During its first year of implementation, MERITO distinguished itself with the following list of accomplishments -

- * Reached over 5,500 Spanish-speaking citizens in the Monterey County region.
- * Participated in nine existing multicultural community events & seven sanctuary education events that drew over 50,000 people.
- * Developed and field-tested 34 bilingual lesson plans for middle school students focusing on watershed and ocean protection.
- * Introduced bilingual in-the-field experiences and ocean conservation issues to 187 Spanish-speaking residents.
- * Translated, developed and printed two sets of Spanish bilingual materials for use at Elkhorn Slough NERR.
- * Generated over \$127.5K in grant monies to support MERITO.
- * Secured funding to train 25 teachers, serving underrepresented high school students, on marine resource issues.
- * Published a marine-themed storybook - *Coralito's Bay*.
- * Launched a dual Spanish-English website.
- * Developed assessment methods and an evaluation plan for all MERITO programs and products.
- * Hosted two diversity initiative internships through CSU Monterey Bay
- * Generated nine newspaper articles, two TV spots and two radio PSA's on MERITO programs.

Family members explore
and learn about sanctuary
and slough wildlife during
MERITO's Kayak Day





Student Silvino Suarez identifies a crab during a crab monitoring project

MERITO's program goals and partnership projects are described in detail on the following pages.

Mission

The mission of MERITO is to provide programs and products for diverse citizens in order to increase their understanding of ocean-related threats within sanctuaries so that the entire community can actively contribute to ocean preservation resulting ultimately in full protection of these special marine resources.

Overarching Goal & Audiences

The MERITO program is committed to providing programs and materials geared for diverse multicultural communities. With limited resources, the initial focus of this year has been the development of partnerships with Spanish-speaking residents and visitors, as they represent the largest multicultural population in the central California Coast region. With full funding and implementation of MERITO, MBNMS can address additional multilingual and multicultural communities residing in the central California Coast area, and eventually the entire California region.

MERITO is a marine conservation education and outreach program, emphasizing field trips and classroom outreach, training and resources, internships and career mentoring designed to encourage better understanding and protection of these special marine resources



Program Goals

Based on changing demographics in central California, *MERITO* was developed in 2001 by the Monterey Bay National Marine Sanctuary in partnership with diverse communities in Central California to provide expanded bilingual outreach and education about marine and coastal environments and their conservation to youth, teachers, adults and families. The three main goals of *MERITO* are to:

- * Collaborate with other natural resource management agencies such as California State Parks and National Estuarine Research Reserves to provide site-based outreach for culturally diverse youth and families,
- * Collaborate with schools and community-centered education groups to build upon and foster new community-based outreach for culturally diverse youth, adults and migrant families,
- * Collaborate with Minority-Serving Institutions to develop and provide teacher trainings and internships for minority-serving teachers and undergraduate and graduate level students.

Partnerships

MERITO outreach programs are made possible through collaborations and partnerships with non-profit organizations, government agencies, schools and academic institutions, and our local and national foundations to provide quality bilingual marine education experiences and materials inspiring understanding and stewardship.

Key Partners for 2002-2003 included:

- * Agricultural Land-Based Training Association
- * Bureau of Land Management Land Management
- * California State Parks, Monterey District
- * California State University, Monterey Bay- Earth System, Science & Policy Institute
- * Calif. Regional Environmental Education Community Network
- * California State University, Monterey Bay- Moss Landing Marine Labs
- * Camp S.E.A. Lab Monterey Bay
- * Channel Islands National Marine Sanctuary
- * City of Watsonville - Parks and Community Services
- * City of Watsonville - Public Works
- * Consortium for Oceanographic Research and Education
- * Elkhorn Slough National Estuarine Research Reserve
- * Marine Advanced Technology Education (MATE) Center
- * Monterey Bay Aquarium
- * Monterey Bay Kayaks
- * Monterey Bay Sanctuary Foundation
- * Monterey County Office of Education - Migrant Education
- * National Marine Sanctuary Foundation
- * Pajaro Valley Unified School District
- * Save Our Shores
- * University of California, Santa Cruz's Mathematics, Engineering, Science, Achievement Program
- * Watsonville Adult Schools
- * Watsonville Wetlands Watch

Organization

MERITO is part of NOAA's Monterey Bay National Marine Sanctuary. Funding support is administered through the Monterey Bay Sanctuary Foundation located in Monterey, California. In August of 2002, MERITO was launched as a new pilot program through funding from the National Marine Sanctuary Program headquarters located in Silver Spring, Maryland.

A total of 5,050 Spanish-speaking citizens were reached through:

Programs	# of People
Community events	4,445
Afterschool programs	35
Lesson Plan presentations	187
In-the-field experiences	383
TOTAL	5,050

SITE-BASED OCEAN OUTREACH PROGRAM

This program represents partnerships between the MBNMS and other natural resource agencies to:

- * Increase Hispanic/Latino visitation to Slough and Park sites
- * Identify needs and provide bilingual translations for Hispanic visitors utilizing the sites
- * Increase stewardship and protection for coastal and ocean ecosystems

MERITO Partnership with Elkhorn Slough National Estuarine Research Reserve (ESNERR)

Main Target Audiences:

- * Hispanic/Latino School Groups visiting ESNERR on weekdays
- * Hispanic/Latino Families visiting ESNERR on weekends
- * Middle school students at Pájaro Middle school in Watsonville

Five main partnership projects were identified during four planning meetings between ESNERR and MBNMS staff:

1. Provide bilingual support for K-12 school groups visiting ESNERR

a. Description & Need:

ESNERR staff identified the need to provide bilingual support for school group tours.

b. Observation:

Teachers and chaperones of Spanish-speaking groups usually come well prepared to translate for students, so the need in this area is low. A MERITO Bilingual Outreach Specialist provided support for two school groups during an introduction at the visitor center.

c. Recommendation:

Include a place on the reservation sheet for teachers to specify if school groups require Spanish/English translation and schedule a Spanish-speaking intern/docent volunteer/staff member as needed.

d. Evaluation tools used:

- * Weekday observations by MBNMS staff
- * School reservations

2. Provide bilingual support for families joining weekend tours at ESNERR

a. Description & Need:

ESNERR staff identified the need to provide bilingual support for Hispanic families participating in tours. Docent led tours are held at 10 am and 1pm every Saturday and Sunday.

b. Observation:

3.5% average Hispanic visitation indicates very low interest and/or participation in weekend tours, therefore the need for this service is low at the moment. No Spanish bilingual tours have been led through the MERITO program to date.

c. Recommendation:

Once greater Hispanic interest and visitation can be measured, the need for bilingual tours may be greater. Building community interest and awareness about ESNERR can and will occur more effectively through targeted outreach in the community. Therefore, greater emphasis should be placed on providing community-based outreach.

d. Evaluation tool used:

Four weekend demographic surveys conducted by MBNMS staff in November and December of 2002. Data results indicated that total visitation by Hispanic visitors represented an average of 3.5%.



Sunset at Elkhorn
Slough National
Estuarine Research
Reserve

3. Identify need and develop bilingual materials

a. Materials:

The following materials were identified for development:

- * ESNERR Trail Guide translation for use by Hispanic visitors.
- * ESNERR Visitor Center exhibit text translation to Spanish
- * A Spanish-language glossary for use by staff at ESNERR
- * Visitor Center Scavenger Hunt worksheets adapted to Visitor Center exhibits with K-3 , 3-5, and Middle School / High School adaptable options.

b. Observations:

Need is currently low due to low number of Hispanic visitors. Yet, as Spanish-speaking visitation increases, the need to provide bilingual materials will increase also. A needs assessment should be conducted with Hispanic visitors at that time. This will ensure that we are designing and delivering the appropriate education tool.

c. Recommendation:

Once Hispanic/Latino visitation increases, the need for Spanish bilingual materials may be greater. A need assessment survey to visitors might help to better identify: 1. Does a need really exist? 2. What is the most effective format for these materials?

d. Evaluation tools used to assess need for bilingual materials:

- * Scavenger Hunt teacher feedback sheet
- * Demographic surveys
- * MBNMS staff observation

4. Pájaro Middle After School Pilot Program

a. Description & Need:

The Pájaro Middle school's "Watershed Institute" utilizes ESNERR as a field site for their once-a-week after school program meetings. ESNERR staff identified the need for outreach to nearby schools in order to encourage greater visitation and use of ESNERR, and identified a school where a prior working relationship exists.

Middle school students, particularly English Language Learners, have limited exposure to career opportunities and issues regarding watershed and marine science. Latinos are largely underrepresented in these fields making the need for more outreach to this community apparent.

During the year, the MBNMS worked with Pájaro Middle School, ESNERR, and other regional environmental education providers, to develop a well-supported and structured curriculum through the services of a Bilingual Education Specialist.

Site-Based Program

Thirty-four lesson plans were piloted with middle school students. Included in these were a variety of experiences taking place at ESNERR such as native plant restoration, shark tagging, and crab monitoring. In addition, a combination of in-class guest presentations offered by professionals in the fields of marine and watershed science, and hands-on activities rounded out the year-long curriculum - *Cielo al Mar/Sky to Sea*. The program utilized public and private field trip opportunities such as the Watsonville Waste Water Treatment Plan, Monterey County Waste Management District and the Monterey Bay Aquarium.

b. Observations:

Based on pre-test data results, the students tested relatively poorly on knowledge of watersheds and marine conservation issues. Therefore, the program began by developing a solid foundation about watersheds and built upon that framework throughout the curriculum.

As the year has progressed, MBNMS staff observed an increased ability by students to articulate and correctly state the connections between watersheds and oceans, how the health of local waters affect humans and wildlife, and why watersheds and oceans need protection. In addition, students have shown interest in bringing their families to ESNERR and participating in stewardship events such as creating and distributing posters on storm drain pollution for "Earth Day."



Bilingual Outreach Specialist, Michelle Templeton, leads students in a seed collection activity

Site-Based Program

Watershed Institute
students explore the
Watsonville Wetlands
with a local expert



c. Recommendations:

Continue involvement with Pájaro Middle School and ESNERR through field trip support and presentations. Explore potential for involving ESNERR docents in after school program. A variety of models for successful docent-led programs at nature centers exist. Two web resources are: Neighborhood Naturalist Clubs www.naturalistsclub.org and San Diego Natural History Museum & DFG www.sdnhm.org/volunteer/naturalist.

In addition, expand program to other middle schools in the area. Pájaro Unified's Superintendent Mays is fully on-board to assist with expansion to the three other schools in her district.

d. Evaluation tools used:

- * Pre and post-test for students relative to their knowledge of watershed and marine issues
- * Ongoing field journals
- * Poetry/Art/Posters
- * Oral presentations to parents during Family Watershed Night

5. Mother's Day – May 2003

a. Description & Need:

A celebration of Mother's Day as well as an invitation to Hispanic families to visit ESNERR to learn about this local treasure and the value of native species. MBNMS and ESNERR staff identified the event as a potential venue for increasing Hispanic family visitation.

b. Observations:

Working with the City of Watsonville, who provided a children's activity and shuttle service, 60 Hispanic visitors (adults and children) attended the Mother's Day event.

Site-Based Program

c. Recommendations:

Develop a task matrix to help organize the staff and groups involved with planning. Compile a Mother's Day event history to refer to or compare costs, attendance, participants, and entertainment etc. in years to come.

d. Evaluation tools used:

- Latino family attendance at the event

MERITO Partnership with California State Parks, Monterey District:

Main Target Audiences:

- * Hispanic/Latino School Groups visiting The Monterey State Historic Park Pacific House (during the week)
- * Hispanic/Latino Families participating in Coastal Cleanup Day

Program planning has continued throughout the year between MERITO and Park staff. However, due to budget issues and staff limitations, the efforts were delayed and did not officially launch until February 2003. Four main partnership projects were identified during four planning meetings between Parks and MBNMS staff:

1. Develop bilingual self-guided tour for school groups visiting Monterey State Historic Park in the Custom House Plaza.

Park's staff identified the need for an educational tour for Spanish-speaking students (and parents) visiting the Pacific House Museum exhibits as part of a field trip. The Pacific House hosts hundreds of third grade students each year, as part of their study unit on California history. The bilingual, self-guided tour, developed by MERITO staff will assist Spanish-speakers, and highlight the multicultural connections between the sanctuary and California history, including historic uses by the Spanish Mexicans, Native Americans, Chinese and other cultures. Currently, the tour is under development and will be piloted in fall 2003.

2. Complete State Parks/Sanctuary Junior Ranger Adventure Guide for distribution at local state park sites.

A second educational resource for Spanish-speakers has been under development over the summer of 2003. MERITO staff is near completion on a Sanctuary Junior Ranger Adventure Guide, a fun, learning tool for young students, to be distributed at five state park sites along the coast in Monterey District. The guide focuses on watershed and ocean protection and will be available fall 2003 in both English and Spanish.

3. Co-sponsor September 20th Coastal Cleanup.

a. Description & Need:

Parks and MERITO staff identified September 20th, 2003 Coastal Cleanup Day as a potential venue to increase Hispanic family involvement and visitation to Park sites. MBNMS co-sponsored the effort in Monterey

Site-Based Program



Coastal Cleanup
volunteers collect and
tally trash and debris
at Salinas River State
Beach

County as part of the MERITO program. MERITO staff worked with Parks and the local Spanish radio station to promote a bilingual beach site at Salinas River State Beach through radio PSA's and bilingual flyers posted throughout the Watsonville community. This site has averaged 60 total volunteers during past years.

b. Observations:

During the 2003 Coastal Cleanup, 123 volunteers participated at the Salinas River State Beach site, (an increase of over 50% from 2002) with 60% representing the Latino community. MERITO staff agreed this turnout was very successful, and attributed the high participation to the Spanish radio PSA's and flyers.

c. Recommendations:

Continue this partnership project for 2004. Possible expansion for MERITO to adopt two beach sites.



4. Highlight State Park sites through Community Presentations.

As part of MERITO's ongoing community-based "lesson plans", presentations, and field trips, Park sites are highlighted as special places to visit and enjoy. Our goal is to survey specific Park sites for baseline demographic data, and then continue monitoring visitation by Hispanic families. We will also track the number of visitors receiving information from MERITO presentations. As with the Reserve, we hope to encourage greater visitation by all our communities to State Parks and Beaches, and make sure resources are not compromised by the increased numbers of folks using the resources.

MERITO Partnership with Bureau of Land Management

This year, the MERITO staff supported two existing programs coordinated by BLM, MESA (UC Santa Cruz's Math, Engineering, Science Achievement Program) and San Luis Obispo County: **MESA Natural Resource Management Days**, Saturday field experiences at Swanton Ranch in Santa Cruz offered during the year to MESA students, and, **MESA Summer Science Camp**, a five-day residential, outdoor experience for underrepresented middle and high school students. Historically, the two

Site-Based Program

programs have focused on sustainable agriculture, protecting natural resources and the environmental sciences through hands-on, learn-by-doing activities. MERITO worked with the staff (including National Forest and NRDC staff) to round out the program by including ocean science activities and reinforcing connections between watersheds and oceans. MERITO provided four full days of bilingual instruction to support and expand the partnership.

In addition, MERITO coordinated a meeting between Camp SEA Lab, MBNMS, BLM, MESA and San Luis Obispo staff to arrange an “exchange” between the two camps. On July 25, 2003, students from Camp SEA Lab Monterey Bay and students from the MESA Camp at Swanton Ranch exchanged venues allowing each to experience the other camp’s curriculum. Based on feedback from both camp directors, the day was very successful and will be repeated as part of an ongoing element.

MERITO Partnership with Consortium for Oceanographic Research and Education (CORE)

This year, MERITO staff worked closely with CORE on a new diversity initiative in order to expand participation of high schools students in the annual National Ocean Science Bowl competition. Program Manager, Karen Grimmer served as the diversity initiative coordinator for the Northern California region feeding into the national competition occurring annually in April. The goal of the NOSB diversity initiative is to increase the number of culturally diverse and underrepresented students in the marine sciences. MERITO shares the same goal, and is therefore assisting with the recruitment of new school, teachers and student teams fitting the above criteria. With the CORE funding, MBNMS was able to offer two weekend enrichment opportunities, text books for group study, and an on-the-water experience. In 2003, two new teams came onboard as part of the initiative. The 2004 goal is to recruit three new teams.

MERITO Partnership with California Coastal Commission (CCC)

MBNMS was an official participant in CCC’s COASTWEEKS, a three-week celebration of marine and coastal resources beginning the third Saturday in September. The celebration kick off was Coastal Cleanup Day, followed by a three week focus on outdoor activities promoting protection of our marine and coastal environments. MERITO posted two events (Coastal Cleanup Day and Kayak Day) on the COASTWEEKS web calendar at www.coastal.ca.gov/publiced/coastweeks/coastweeks.html

Summary of Site-Based Program for 2002-2003

Based on initial results, a number of the site-based programs are slated to continue in 2003-04. In addition, the team has identified a strong link between the Community-Based program and the Site-Based program. There is a strong need to build awareness in the community about the existence of the Sanctuary, Reserve, State Parks, and BLM programs.

Site-Based Program



COMMUNITY-BASED OCEAN OUTREACH PROGRAM

This program represents a partnership between the MBNMS, school districts (adult school organizations, middle schools, migrant parent groups), local cities, and non-profit groups with mutual goals to:

- * increase ocean and watershed awareness and stewardship among Latino youth, families and adults focusing on:
 - urban runoff and stormdrain pollution
 - non-point source issues and solutions
- * provide learning opportunities for getting involved in marine and coastal clean-ups, monitoring efforts or other regional education events.
- * build community ownership of our marine and coastal resources

MERITO Partnership with Monterey County Office of Education - Migrant Education

a. Description & Need

Summer tidepool field trips are provided by MBNMS staff as requested by Region XVI Migrant Education Coordinators, as part of a collaboration to expand marine education and outreach opportunities to diverse students through the Sanctuary's MERITO Program. The students prepare for the field trip by studying their favorite tidepool animal or plant, and learning how to be responsible "Tidepool Explorers." Prior to delving into the tidepools, leaders review etiquette and safety rules to ensure both people and tidepool inhabitants are kept safe. They also discuss tides, intertidal zones, and animal adaptations to rocky shore life. The ninety-minute visit is the highlight, as small groups of students, accompanied by sanctuary staff and adult chaperones, explore and discover an amazing array of tidepool life. The visit is concluded by a discussion on natural and human impacts to tidepools. The team has provided these trips over the past three summers.

The target audiences for this program are students in grades 4-8, enrolled in migrant education.

b. Observations

Ms. Marsha Epps, a teacher with Gavilan View Middle School comments - "My students love coming to the tidepools! Many have never even gotten their feet wet in the ocean. Visiting the tidepools really helps them understand why the ocean is such an amazing place."

c. Recommendations:

Continue and expand this program in the summer months.

d. Evaluation tools used:

Numbers reached - 175 students have participated to date.

Community-Based Program

MERITO Partnership with Watsonville Adult Schools

a. Description & Need

The Monterey Bay National Marine Sanctuary piloted a Spanish-bilingual lesson plan with the Pájaro Valley Unified School District's Watsonville Adult Education, English Language Civics (ELC) program. The goal of the interactive units are to reach an audience that may not otherwise have watershed or marine-related field experiences. The "lesson plans" were presented by MERITO's Bilingual Education Specialist and included a power-point presentation focused on coastal water quality issues, an interactive watershed model demonstration, written activities focused on language development, and a written evaluation. This lesson plan was made available to all interested teachers in the ELC program, and 187 adult students participated in 2003.

The main target audience is Hispanic adults enrolled in adult schools.

At the end of the lesson plan, free passes to the ESNERR are handed out to all students along with MBNMS, ESNERR, California State Parks, and Monterey Bay informational brochures. Ways to get more involved such as current volunteer opportunities, and upcoming community events focused on watershed protection, like "Kayak Day", Día del Niño, and Coastal Cleanup Day, are promoted. Adult Education students are given practical tools to help them become stewards. Lastly, students complete a written evaluation which is available in Spanish or English.

b. Observations

Based on feedback from Watsonville Adult School (WAS) staff, the bilingual "lesson plans" are well received and effectively provide information on watersheds and marine conservation issues. WAS staff have requested for the 2003-2004 year we continue to provide the lesson plan and in addition, provide field trips to the Reserve and other coastal sites as part of their ongoing curriculum.

c. Recommendations:

Continue providing inclass "lesson plans" through WAS, and expand the lesson plan to adult schools in Salinas and the Salinas Valley region.

d. Evaluation tools used:

Show of hands for knowledge about the Sanctuary at beginning of presentation (zero for over 180 students). Post evaluation results are currently being compiled.

Community-Based Program



MERITO Partnership with Pájaro Valley Unified School District's Migrant Parent Conferences

a. Description & Need

Working with Pájaro Valley Unified School District's Migrant Education Program, MERITO has participated in two Migrant Parent Conferences - "Padres Migrantes: Cultivando Futuros Lideres" (Migrant Parents: Cultivating Future Leaders).

The goal of this partnership is to build awareness of marine and watershed issues with migrant parents through a panel exhibit and direct information exchange between staff and parents. In addition, MERITO staff interviewed parents to learn about their knowledge of the sanctuary and issues of concern regarding the environment.

b. Observations

Data results from 37 interviews conducted in February 2003 reported 25 out of 37 respondents had never heard of the MBNMS, and 26 out of 37 respondents were "seriously concerned" about the use of pesticides in their community. "Kayaking" was the number one response to a question on suggestions for activities that would interest a family.

c. Recommendations:

Based on these findings, we are pleased to report that eight conference participants joined our March 2003 "Kayak Day". MERITO staff will continue to participate in the Migrant Parent Conferences, collect data, and explore the potential for providing workshops during future conferences and additional field trip opportunities.

d. Evaluation tools used:

- * Bilingual interview tool
- * Tallied number of Elkhorn Slough passes redeemed - 11 passes for 44 total visitors

Migrant Education coordinators pause for a photo at the Conferencia Familia in December 2002



Community-Based Program

MERITO Partnership with community groups for Kayak Day, an in-the-field experience led by bilingual naturalists

a. Description & Need

In March of 2003, MERITO staff working with the Elkhorn Slough National Estuarine Research Reserve, the Monterey Bay Aquarium, Pájaro Valley Unified, Monterey Bay Kayaks, and Save Our Shores, led a group of 25 Latino adults and students on a kayak tour of the Elkhorn Slough Reserve. The main goals were to provide a positive experience to first time kayakers, encourage participants to learn watershed protection messages through a fun activity, and impart some focused wildlife disturbance messages about the animals living in the slough and the sanctuary.

b. Observations:

All participants stated they enjoyed the experience immensely and would like to repeat the kayak tour again, or participate in some other types of field experiences. As part of the evaluation, we had the group disembark at the mudflat on the way back in, and asked for some impressions about the experience. Here are some "translated" impressions, as most were offered in Spanish:

"I never realized there was so much life and so many plants and animals in this environment."

"Learning about the watershed, how everything that goes into the water can get into the sanctuary. How if water goes over a parking lot with oil in it, oil can get into the water."

"We feel like a family today, coming together to protect the same things."

"Seeing everything and learning, the shells, the wildlife,"



A Kayak Day group
shot at Elkhorn Slough
Reserve in March 2003

**Community-Based
Program**

On Kayak Day, adults join a bilingual, naturalist-led tour with MERITO staff and community partners



On our return paddle, we saw a sea otter who came in close, and we took the opportunity to discuss safe wildlife viewing guidelines. Upon departure, participants received a resource bag including ESNERR passes, Mother's Day event flyers and other bilingual sanctuary resources.

c. Recommendations:

Repeat this and offer a fall and spring series of in-the-field opportunities. The next Kayak Day is scheduled for October 5, 2003. We are planning a slough hike in November and a sanctuary tidepool trip in December. We tracked how participants had heard about the Kayak Day event. 25% of participants were drawn from Watsonville Adult School, where students had received a sanctuary "lesson plan," and 45% of participants had talked with MERITO staff at migrant parent conferences. The remainder heard about the program through their community.

d. Evaluation tools used:

- * Oral testimony offered by participants.
- * Tracked where participants heard of the Kayak Day event.
- * Media coverage indicates community interest.
 - Article in the Monterey Herald: "Learning the language of nature" - Elkhorn Slough: Latino Immigrants explore sanctuary" Posted on Mon, Mar. 31, 2003

MERITO Partnerships to support existing community events

In partnership with many other regional groups, the Monterey Bay National Marine Sanctuary's MERITO team participated in a series of events designed to provide outreach for the Hispanic community. MERITO directly reached 4,445 Spanish-speaking citizens through the coordinated partnership events listed in this report. MERITO staff also supported annual sanctuary education events including the 2002 Ocean Fest, 2003 WhaleFest, 2003 Sanctuary Symposium, 2003 Shark Fest, & the 2003 Santa Cruz County Fair, resulting in additional outreach to over 50,000 residents.

**Community-Based
Program**

Main messages during the events included, but were not limited to, watershed conservation, ocean and sanctuary conservation, water-related pollution, non-point sources of pollution, including agricultural impacts and trash and debris impacts, and protection of Parks, the slough, and the sanctuary.

Summary Calendar for 2002-2003

Saturday, December 7, 2002 - 4th Annual Conferencia Familia

Saturday, February 22, 2003 - "Padres Migrantes: Cultivando Futuros Lideres" (Migrant Parents: Cultivating Future Leaders)

Sunday, April 27, 2003 - Día del Niño with Monterey Bay Aquarium

Sunday, April 27, 2003 - Día del Niño & Earth Day with the City of Watsonville

Sunday, Thursday, May 8, 2003 - Family Watershed Night

Sunday, May 11, 2003 - Mother's Day at Elkhorn Slough

Sunday, May 17, 2003 - Castroville Artichoke Festival

Sunday, June 1, 2003 - Family Farm Day in Salinas

Saturday, September 20, 2003 - California Coastal Clean-up

Specific event descriptions

Sunday, April 27, 2003 - Día del Niño with Monterey Bay Aquarium
Monterey Bay National Marine Sanctuary education staff and a MERITO intern participated in Monterey Bay Aquarium's 2nd annual Día del Niño/Day of the Child celebration. Watershed model demonstrations and the "touch and feel" box activities were hosted by MBNMS. A variety of hand-on kid's activities, music, dance and free admission were provided to children. 7,800 visitors attended, and at least 1,000 Hispanic visitors participated in MERITO activities.

Sunday, April 27, 2003 - Día del Niño & Earth Day with the City of Watsonville

MBNMS, Save Our Shores, Watsonville Wetlands Watch, Elkhorn Slough



MBNMS Bilingual Outreach Specialist, Michelle Templeton, demonstrates watershed pollution during City of Watsonville's Día del Niño/Day of the Child Festival

**Community-Based
Program**

Pájaro Watershed Institute students present their projects to peers and parents at the Family Watershed Night

National Estuarine Research Reserve, Ecology Action, Camp SEA Lab, Monterey Bay, Resource Conservation District, ALBA and the City of Watsonville Public Works teamed up to provide a special "Earth Day" component of the City's fifth annual Día del Niño/Day of the Child celebration. Family-oriented, environmental education activities included litter cleanups and nature walks. Music, dancing, free hot-dogs, and speeches from Assemblymember Simon Salinas and MBNMS Superintendent William Douros rounded out the day. 3,000 people attended the event and 1,500 children completed Earth Day passport activities.

Thursday, May 8, 2003 - Family Watershed Night

The Pájaro Middle School Watershed Institute held a Family Watershed Night. This evening is the culmination of the student's experience and knowledge built from MERITO's one-year pilot program. The event was student-led and delivered watershed and marine information to family and peers during the school's evening Open House. Students demonstrated the watershed model, soil erosion model, marine mammal thermoregulation, water quality testing and had a microscope/ videoscope station for visitors to explore plankton samples taken from the Elkhorn Slough. Over 150 parents and students attended the event.



Sunday, May 11, 2003 - Mother's Day at Elkhorn Slough

The MERITO team participated in the Elkhorn Slough National Estuarine Research Reserve's Mother's Day Event. The event included free flowers for mothers, live music, free food, walking tours, a bilingual puppet show by Save Our Shores and activity booths for all ages. ESNERR, the Elkhorn Slough Foundation, Watsonville Parks and Community Services and MBNMS provided activities, arts and crafts. A display of the Pájaro Middle School Watershed Institute's art and poetry debuted in the

**Community-Based
Program**



Families join MERITO staff member, Michelle Templeton, in celebrating Mother's Day at Elkhorn Slough Reserve

Visitor Center. MERITO's role in event planning included providing bilingual materials and promoting Latino attendance. Over 600 people attended, including 12 Latino families.

Sunday, May 17, 2003 - Castroville Artichoke Festival

MERITO staff attended the Castroville Artichoke Festival. This multicultural event drew in approximately 15,000 local community members as well as visitors from across the country. The MERITO team educated 750 visitors about the sanctuary and provided fun activities for children.

Sunday, June 1, 2003 - Family Farm Day in Salinas

MERITO and Ag Plan staff teamed up to participate in Agricultural Land-Based Training Association's Family Farm Day Festival at the Rural Development Center in Salinas. The MBNMS provided the watershed model demonstration and information on the sanctuary's Agricultural & Rural Lands Plan. The event brought out 60 Latino farmers and their families to enjoy farm demonstrations, hands-on activities, food and music.

Summary of Community-Based Program for 2002-2003

MERITO participated in nine community events throughout the year resulting in targeted outreach to approximately 4,445 Hispanic community members. This strategy has added value as we are promoting sanctuary awareness and the importance of protecting marine resources through existing community events. In addition, many of these events did not historically include a marine conservation element. MERITO staff will continue to participate in and help coordinate community events throughout 2004.

We plan to increase the 570 adults reached through expanded partnerships with adult schools to provide "lesson plans" on coastal issues. We will also continue to coordinate MERITO in-the-field experiences which include "Kayak Day", Slough hikes, tidepool tours and other monitoring or field-related activities.

Community-Based Program

This program addresses the need for increased professional development opportunities for Hispanic-serving teachers focused on the marine sciences, and increased paid-internship opportunities for Hispanic undergraduate and graduate level students.

MERITO Partnership with California State University, Monterey Bay

The main target audiences were Hispanic undergraduate and/or graduate level students

a. Description of need:

California State University Monterey Bay has identified the need to provide marine science-focused internships to undergraduate and graduate level students, and has received a grant from NOAA's Environmental Entrepreneurship Program/Minority Serving Institution to support this goal.

The MERITO Bilingual Outreach Internship is being implemented through a partnership with CSUMB and the NOAA grant program for 2003 and 2004. In spring 2003, the MERITO team worked with CSUMB to recruit, train and mentor one Hispanic intern, Claudia Pineda, to assist with implementing the site-based outreach program. Claudia's four key outcomes were to effectively:

- * Collect & compile community survey data
- * Teach marine science to students in the afterschool program
- * Provide Spanish translations for the new MERITO website
- * Represent the MBNMS at multicultural community events

b. Observations:

Over the semester, Claudia progressed steadily in all four areas of focus. She was able to effectively apply her new teaching methods to inspire and mentor the middle school students. Claudia's confidence in her presentations built steadily as she practiced demonstrating the watershed model to families, and promoted the sanctuary and its programs to the general public, in Spanish and English. Claudia presented her experience formally to her peers and to the internship review panel on her MERITO internship, and received an A grade. We are happy to report, Claudia will be returning in the fall for a second paid internship, the maximum allowed for one student under this grant.

Following is a quote from Claudia's portfolio:

"In terms of future career goals, this internship has showed me the importance of having a strong background in science in order to provide adequate outreach regarding environmental issues to all members of the

community whether young or old and regardless of race. I am an Earth Systems Science and Policy major at California State University Monterey Bay. When I first started my internship, I was concentrating in formal science education with the intentions of either teaching science in a traditional classroom setting or serving as a consultant who would teach science informally. After looking at the current, as well as the past, state of teaching in California I decided to pursue a degree in marine and coastal ecology. After graduating from CSUMB, I am looking to attend a Masters program, which will prepare me to work for a government agency and will also give me a strong background to teach in my community."

c. Recommendations:

Continue and expand the internship program. There are many academic institutions in this region who are interested in placing interns into the MERITO program. Monterey Institute of International Studies, University of California, Santa Cruz, Monterey Peninsula Community College, and Hartnell Community College, to name a few. Additional funds are needed to pursue this avenue. MERITO partners have also expressed interest in recruiting culturally diverse interns to augment their programs. Both Elkhorn Slough National Estuarine Research Reserve and California State Parks have expressed such interest, especially in light of the current state budget situation.

d. Evaluation tools used:

Since this year was CSUMB's first year under the new funding, MERITO assisted in the development of new evaluation tools. In essence, the MERITO internship served as a pilot for CSUMB's program which included a number of evaluation tools, including, but not limited to:



CSU Monterey Bay intern(left), Claudia Pineda, teaches young girls the importance of protecting watersheds at a Mother's Day event at Elkhorn Slough Reserve

- * a learning contract with four measurable outcomes and four core outcomes
- * an intern and mentor self assessment survey
- * an internship performance feedback survey
- * intern oral presentation survey
- * final outcomes survey

MERITO Partnership with CSU's Moss Landing Marine Laboratories and National Hispanic University

This program addresses the need, expressed from regional academic institutions, for increased professional development opportunities for Hispanic-serving teachers focused in the marine sciences.

a. Description of need:

Our partners at the National Hispanic University (NHU) and California State University Monterey Bay (CSUMB) have identified the need to provide effective professional development focused on the marine sciences to pre-service and in-service teachers. In addition, they state the large influx of new teachers flooding central California schools need effective tools to teach science to diverse students. Based on this data, MBNMS will partner with NHU, CSUMB and Moss Landing Marine Labs to provide an annual Summer Teacher Institute focused on the marine sciences, targeting Hispanic-serving teachers in the region.

The five main objectives of the Summer Teacher Institute are to:

- * Provide K-12, Hispanic-serving teachers, with a foundation for issue-based marine science and teaching materials to educate their students about marine resource and conservation issues
- * Train teachers how to access resources from the network of regional marine-related organizations, and develop peer support groups to strengthen ongoing use of curricula
- * Work with partners to develop or utilize existing curricula aligned with State and National standards, focused on marine-related management issues (e.g. ecosystem monitoring or fisheries management)
- * Develop and implement a Teacher Institute Evaluation Plan
- * Provide transportation, teacher stipends, printed curricula, and ongoing program support

The MERITO team was recently awarded 2004 funding based on a proposal for the goals listed above through the NOAA Bay Watershed and Education Training (B-WET) program. B-WET is a competitive grant program developed to support "meaningful" experiences in watersheds. The project is a joint effort between MERITO and MLML. The Co-PI's on the proposal are Ms. Karen Grimmer, MBNMS and Dr. Simona Bartle, MLML. The grant is entitled "Incorporating Marine Research and Resource Issues into Public Education"

Hispanic-Serving Institution Program

Summary of Hispanic-Serving Institution Program for 2002-2003

The MERITO team will continue to implement college internships and professional development for teachers through this program component. The current goal for internships is to host 2 interns per year. We hope to increase that number to 4 in 2005, and contribute to NOAA's strategic goal to actively encourage and promote careers in the environmental sciences.

In addition, the team will work to provide at least one teacher workshop per year. Contingent on funding and need, additional workshops will be offered.

**Hispanic-Serving
Institution Program**



MERITO OUTREACH PRODUCTS

MERITO Website

Nearly 7.6 million Hispanics accessed the Internet from home in June 2002, a 13% increase over June 2001. Hispanics are now the third-largest ethnic group online, according to a Nielsen/NetRatings survey.

This data supports the development of a dual English/Spanish website to serve as a bilingual resource for our Spanish-speaking citizens, and will keep everyone informed about MERITO's efforts.



Initiated in January 2003, such a website has been under development by MERITO staff. The primary audience for the website is Spanish-speakers, although the content is designed to be informational for all visitors.

The goal of the website is to provide bilingual information on MERITO programs, dates of upcoming calendar events, background information on sanctuary issues, downloadable bilingual materials, contact information, and reports and documents related to MERITO.

The new MERITO logo highlights the connection between land and sea



The website will be officially launched in November 2003, and staff plans to work with all MERITO partners to promote and receive feedback on the site. The goal is for the website to be a useful educational resource for our Spanish-speaking community, and also help get the word out to all about MERITO's efforts. The MERITO website address is:
www.montereybay.noaa.gov/educate/merito/welcome.html

"Coralito's Bay" Children's Book

A bilingual Spanish and English children's book *Coralito's Bay* written by renowned poet and author Juan Felipe Herrera and illustrated by artist Lena Shiffman, was commissioned by MERITO staff over the past year. The book is due for release in winter 2003.

The book will be a full-color, 40 page children's book describing the story of a migrant child and his magical journey through the MBNMS in an adapted, underwater flower truck. Coralito encounters many of the marine characters living in the sanctuary, as well as, some of the impacts threatening these ocean residents. The book includes conservation messages about watersheds and oceans, information on MBNMS and the NMSP, regional marine education resources, and ways to "make your own journey" and get involved with ocean protection. National and state standards are currently focused on building reading



Coralito flies through the sanctuary's kelp forest

MERITO Outreach Products

and writing skills. *Coralito's Bay* will allow teachers and students to "explore science through language and art," and the bilingual aspect will enhance English language development (ELD). The marine-oriented story is richly woven around Hispanic family traditions, building a bridge between people and the ocean. This book is one of a kind for all of the above reasons.

The book will be distributed as part of a marine conservation "tool kit" including a suite of bilingual materials designed for upper elementary and middle school students including a field-tested activity guide, a CD ROM, posters and fact sheets. The kit will be distributed in partnership with migrant education departments across California.

Newsletter Elements

The past three MBNMS newsletters have included bilingual children's activities and articles relating to MERITO. As part of the effort to integrate multicultural education into general education, the MBNMS newsletter will continue to highlight and explore topics relevant to our multicultural community.

Media Coverage

Media is a primary source of information and education for the entire community, and can effectively broadcast a message to a larger audience. This year, MERITO staff focused on engaging Spanish-language print, television, radio and web media with programs highlighting Hispanic participants. Some of the planned events and the in-the-field experiences were perfect candidates for action photos and interviews.

A summary of MERITO media coverage:

Newspapers

1. November 14, 2003 - *Register-Pajaronian* article - "From sky to sea," focuses on the Pajaro Middle school "Watershed Institute" activities.
2. December 5, 2003 - *The Californian* - "Marine program aimed at Latinos," discusses the MERITO program goals and activities as they relate to the local community.
3. December 11, 2002 - *El Sol* - "Programa marino se enfocará en los Latinos," a Spanish translation of the above article on MERITO. Focuses on the MERITO "Kayak Day" program at Elkhorn Slough Reserve.
5. April 29, 2003 - *Register-Pajaronian* article "Kiddin' around with nature." This article highlights the Día del Niño / Earth Day event in Watsonville.
6. April 19, 2003 - *Register-Pajaronian* article "Marine Sanctuary Targets Hispanic Population." talks about MERITO activities in relationship to Earth Day.

7. May 13, 2003 - *Register-Pajaronian* "Looking out for all mothers."
A piece that highlights the annual Mother's Day event at Elkhorn Slough and touches on the partnership with MERITO in terms of encouraging increased appreciation of the slough.

8. Sept. 16, 2003 - Monterey County Herald "MONTEREY BAY Coastal Cleanup Day to be Saturday at 21 county sites."

9. September 17, 2003 - *Santa Cruz Sentinel* "Coastal Cleanup Day needs some volunteers."

TV Newstories:

1. December 17, 2002 - KSBW Channel 8 - Interviews with Pajaro Middle School afterschool students at Watsonville Wetlands (3 mins).

2. December 19, 2002 - KSMS Channel 67 (Spanish) - Interviews with Pajaro Middle School afterschool students at Watsonville Wetlands (10 mins).

Radio PSAs

1. February 2003 - KLOK FM ran a series of 60 second PSA's on using a new environmentally-friendly carwash in Watsonville. The PSA campaign was a Joint project between MERITO and Save Our Shores.

2. September 8-20th - KSES 107.1FM Super Estrella ran a series of 30 second PSA's highlighting the September 20th Coastal Cleanup and the two bilingual sites.

Websites

A MERITO article is spotlighted on the California Department of Education's California Regional Environmental Education Community Network (CREEC) - Region 5.

Visit: <http://science.santacruz.k12.ca.us/creec/spotlights.shtml>



A Watershed Institute student is interviewed by KSMS Spanish TV station on her field trip with MERITO staff to Watsonville Wetlands

**MERITO Outreach
Products**

FUNDING & FUTURE DIRECTIONS

Summary of Funding

The National Marine Sanctuary Program provided seed money for implementation of MERITO. Two full-time MERITO positions were contracted: a program manager, and a bilingual outreach specialist.

The Monterey Bay National Marine Sanctuary provided program support funds to assist with implementation of the site-based program.

The National Marine Sanctuary Foundation nominated MERITO as a top funding priority, and has worked to raise funds from foundation and corporate sponsors for the community-based program. The NMSF was awarded funds for MERITO from the National Fish and Wildlife Foundation and the McMahon Foundation

The Monterey Bay Sanctuary Foundation was awarded a MERITO grant from the Community Foundation of Monterey County to support the community-based program

NOAA's Bay Watershed and Training (B-WET) program awarded a joint MERITO and Moss Landing Marine Laboratory proposal to implement a one-week 2004 Summer Teacher Institute - "Field and Lab Explorations in Marine Science"

The California Resources Agency awarded a Coastal Impact Assistance Program award to assist with implementation of MERITO.

Inkind Support

Elkhorn Slough National Estuarine Research Reserve provided program support for the MERITO site-based program through weekly planning meetings, use of vehicles, tracking information and overall staff support.

California Department of Parks & Recreation, Monterey District provided program support for the MERITO site-based program through planning meetings, input on program development, tracking information and overall staff support.

NOAA's Coastal Services Center supported MERITO through funding for professional evaluation services to assist staff in developing an evaluation plan for all MERITO programs and projects. In addition, CSC provided a "Project Design and Evaluation" workshop in Monterey for MERITO partners and regional educators to learn how to apply performance measures to projects. MERITO staff presented a complete logic model with objectives, resources, outputs, and longterm outcomes.

Future Directions

Multicultural Outreach in MBNMS Management Plan

As part of the MBNMS management plan review process, the public and MBNMS staff, identified the need for a MERITO action plan (a set of strategies and activities) which will ultimately result in full implementation of MERITO. The strategies are based on a variety of feedback mechanisms including the needs outlined in the June 2001 MERITO Plan, input received during the joint management plan public scoping sessions, and evaluation data resulting from the first year of implementation. The MERITO action plan is a five year strategic plan for implementation and expansion to other sanctuaries.

Intra-Sanctuary Expansion of MERITO

MERITO staff coordinated a June meeting in Santa Barbara with Channel Islands National Marine Sanctuary (CIMNS) staff and partners, to discuss expansion of MERITO strategies to CINMS. The meeting was very productive and resulted in a clear set of actions on how to pursue the goal. The group agreed that the first priority would be to secure funding for a part-time contracted MERITO Regional Coordinator, who will focus on conducting a local needs assessment in the Santa Barbara region, and begin developing partnerships based on the results. This strategy is also of interest to the Gulf of the Farallones and Cordell Banks National Marine Sanctuaries. MERITO staff will pursue funding opportunities to expand MERITO into a California statewide initiative. NMSP mini-grants were identified as a potential source of funding.

Develop MERITO Advisory Committee

A goal for 2004 is to develop an official statewide or national advisory committee to provide input and guidance on the process of integrating multicultural outreach in sanctuaries. The process will be to review existing MERITO partners and identify individuals who can offer expertise in a variety of marine-related areas. In addition, we will identify and recruit new candidates who may be interested in serving on this committee.

In Summary

The MERITO program is uniquely positioned to provide a forum for multicultural outreach focused on sanctuaries among schools, universities, youth groups, marine education organizations, and government agencies. The need for our entire society, including culturally diverse citizens, to better understand and protect fragile marine and coastal ecosystems has never been greater. For more information about MERITO programs and this report, please contact Karen Grimmer, MERITO Program Manager at (831)649-2360 or email karen.grimmer@noaa.gov